UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,493	01/24/2002	Francois Hirsch	P67289US0	6661

136 7590 12/11/2006

JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER	
SCHNIZER, RICHARD A	

ART UNIT	PAPER NUMBER
1635	

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,493	HIRSCH ET AL.	
	Examiner	Art Unit	
	Richard Schnizer, Ph. D.	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *64-126* is/are pending in the application.

4a) Of the above claim(s) *65-74,76-90,93,94,96-98,106 and 107* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *64, 75, 91, 92, 95, 99-105, and 108-126* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/27/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's election with traverse of a conjugate comprising a nucleic acid molecule, a translocation domain, an antibody, and histone, wherein the translocation domain, an antibody, and histone are attached to a molecule of the avidin type by means of a biotin molecule in the reply filed on 10/30/06 is acknowledged. The traversal is on the ground(s) that MPEP 806.02 indicates that claims are ordinarily assumed to be novel and non-obvious. This is unpersuasive because there is no section "806.02" of the MPEP, moreover chapter 800 of the MPEP is clearly limited to a discussion of the subject of restriction and double patenting under Title 35 of the United States Code and Title 37 of the Code of Federal Regulations as it relates to national applications filed under 35 U.S.C. 111(a). See MPEP 801. The instant application was filed under 35 U.S.C. 371 and so the Patent Cooperation Treaty Articles and Rules are applied, as was indicated in the Office Action of 8/24/06. See MPEP chapter 1800. As discussed, in that Office Action, the technical feature linking the various inventions was anticipated by the prior art and so cannot be a special technical feature under PCT Rule 13.2. The requirement is still deemed proper and is therefore made FINAL.

Applicant asserted at page 16 of the response that the elected species reads on claims 64, 75, 91, 92, 95, and 99-126. This is incorrect. The elected species does not read on claims 106 and 107, which are limited to nucleic acid binding domains other than biotin. Claims 65-74, 76-90, 93, 94, 96-98, 106, and 107 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected

species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/30/06.

Claims 64, 75, 91, 92, 95, 99-105, and 108-126 are under consideration in this Office Action.

Information Disclosure Statement

An information disclosure statement was received and entered on 6/27/02. Citations AN-AQ are in improper format because they contain no journal name, volume number, page number, or year of publication.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 111 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 111 is indefinite because it is unclear if Applicant intends the claim to be limited to: any fragment of Haemophilus A hemagglutinin with SEQ ID NO:5 as an example; to only the fragment of Haemophilus A hemagglutinin that is SEQ ID NO: 5; or to a fragment of SEQ ID NO:5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 64, 75, 91, 92, 95, 99-101, 103-105, 108, 109, 112, 113, 116-122, and 124-126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wels et al (WO 96/13599) in view of Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and Grandi (WO 98/59065).

Wels disclosed conjugates comprising a complex between a nucleic acid and a fusion protein, wherein the fusion protein comprised:

(1) a target cell-specific binding ligand domain such as a tumor-specific antibody,

(2) a translocation domain such as one derived from exotoxin A, Colicin A, d-endotoxin, diphtheria toxin, Pertussis toxin, E. coli toxins, or Shiga toxin,

(3) a nucleic acid binding domain such as an RNA binding domain or the DNA binding domain of GAL4.

See abstract; page 2, lines 15-17; page 4, items 1, 2, and 3; page 5, lines 8-23; page 7, lines 10 and 11; page 8, lines 8-12 and last full paragraph; and page 10 first and second full paragraphs.

Contemplated nucleic acids include RNA, and single and double stranded DNAs, including expression constructs encoding cytokines. See page 11, third full paragraph, and page 18, third full paragraph through page 21.

Wels did not teach a conjugate in which the translocation domain, the antibody, and the nucleic acid binding domain were not fused together, but were each bound to

avidin via a biotin bridging agent instead. Wels did not teach histone protein as a nucleic acid binding domain.

Barnett disclosed a complex between a nucleic acid and a conjugate comprising a targeting domain, a translocation domain derived from exotoxin A, and a nucleic acid-binding domain such as poly lysine, histone protein, or a sequence specific DNA binding protein. While Barnett disclosed the conjugate as a fusion protein similar to that of Wels in one embodiment, Barnett also taught that the various elements of the conjugate could be synthesized independently and subsequently linked together. Contemplated nucleic acids include expression constructs and sense and antisense oligonucleotides. See abstract; paragraph bridging pages 5 and 6; sentence bridging pages 6 and 7; page 7, lines 8-23; sentence bridging pages 7 and 8; and page 8, lines 8-10.

Kabanov taught polycationic block copolymer/nucleic acid complexes in which the polycation was modified by conjugation to a targeting antibody. See abstract and column 19, lines 5-18. Conjugation was performed by means of avidin-biotin binding interactions. In one embodiment Kabanov taught biotinylation of both the polycation, and the targeting molecule followed by linkage through avidin. Kabanov noted that avidin has 4 biotin binding centers. See column 20, lines 12-15. As a result it was clear to one of skill in the art that avidin could accommodate up to four biotinylated ligands.

Grandi taught complexes between a nucleic acid and a conjugate comprising a toxin or toxin-like molecule comprising a DNA-binding motif, wherein the toxin or toxin-like molecule is rendered non-toxic and serves as a binding and translocation domain. See abstract; page 1, lines 1-14; page 7, lines 1-26. Grandi also taught that histones

and GAL4 were functional equivalents as DNA binding motifs in transfection complexes. See page 8, lines 1-13. Contemplated nucleic acids include single and double stranded DNAs and RNAs of any length. See page 16, lines 30-34.

It is clear from the art of record that conjugates comprising targeting domains, toxin-derived transduction domains, and polycationic nucleic acid-binding domains were well known in the art at the time of filing, as were complexes of these conjugates with nucleic acids. The prior art taught that the elements of these conjugates could be combined as a fusion protein, or synthesized separately and subsequently linked to each other (Barnett). Similarly, one of ordinary skill in the art at the time of the invention appreciated that it was routine in the art to link conjugates together by means of biotin/avidin binding interactions. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention, as a matter of design choice, to modify the invention of Wels by synthesizing the translocation domain, targeting domain, and nucleic acid-binding domain separately, as taught by Barnett, derivatize them with biotin, and link them together with avidin as taught by Kabanov. One could have done so with a reasonable expectation of success in view of the well known fact that avidin can accommodate up to 4 biotin binding interactions simultaneously, as taught by Kabanov.

It would have been similarly obvious to substitute biotin for GAL4 as a DNA binding domain because these were recognized in the prior art as equivalents for the purpose of binding nucleic acids for delivery in targeted transfection complexes, in view of the teachings of Grandi. MPEP 2144.06 indicates that when it is recognized in the art

that elements of an invention can be substituted, one for the other, while retaining essential function, such elements are art-recognized equivalents. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). Furthermore, MPEP 2144.07 indicates that the selection of a known material based on its suitability for its intended use supports the determination of prima facie obviousness. See also Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Claim 124 is included in this rejection because, absent evidence to the contrary, any nucleic acid comprised by the conjugate of Wels as modified above would be capable of being integrated into a cell's genome.

Thus the invention as a whole was prima facie obvious.

Claim 102 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wels et al (WO 96/13599), Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and Grandi (WO 98/59065) as applied to claims 64, 75, 91, 92, 95, 99-101, 103-105, 108, 109, 112, 113, 116-122, and 124-126 above, and further in view of Hoogeveen et al (US 6,635,623).

The teachings of Wels, Barnett, Kabanov, and Grandi are summarized above and can be combined to render obvious a conjugate comprising a nucleic acid molecule, a translocation domain, an antibody specific for a surface antigen of a tumor cell, and a nucleic acid-binding histone, wherein the translocation domain, the antibody,

and the histone are each bound to avidin via a separate biotin bridge. The references also render obvious methods of delivering nucleic acids to tumor cells. See Wels at page 20, lines 8-13, and paragraph bridging pages 20 and 21.

These references did not teach a nucleic acid encoding Bax.

Hoogeveen taught a nucleic acid encoding Bax, and claimed a method of delivering the nucleic acid to a tumor cell. See claim 13.

It would have been obvious to one of ordinary skill in the art to use the invention of Wels, as modified above, to deliver to a tumor cell a nucleic acid encoding Bax, because Hoogeveen taught that Bax induces apoptosis. So, one of ordinary skill could reasonably expect to cause such an effect in tumor cells, and such would be useful for basic research into tumor cell biology.

Claims 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wels et al (WO 96/13599), Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and Grandi (WO 98/59065) as applied to claims 64, 75, 91, 92, 95, 99-101, 103-105, 108, 109, 112, 113, 116-122, and 124-126 above, and further in view of Wagner et al (Proc. Nat. Acad. Sci. USA 89: 7934-7938, 1992) and Hawley-Nelson et al (US 6,376,248).

The teachings of Wels, Barnett, Kabanov, and Grandi are summarized above and can be combined to render obvious a conjugate comprising a nucleic acid molecule, a toxin-derived translocation domain, an antibody specific for a surface antigen of a tumor cell, and a nucleic acid-binding histone, wherein the translocation

domain, the antibody, and the histone are each bound to avidin via a separate biotin bridge. The references also render obvious deleting from the toxin-derived translocation domain any portion of the toxin protein that would be harmful to the target cell. See Barnett at page 5, lines 3-14, and paragraph bridging pages 5 and 6. See also Grandi at page 7, lines 7-17.

These references did not teach a virus-derived translocation domain.

Like Wels, Barnett, Kabanov, and Grandi, Wagner taught a modular system for nucleic acid delivery to cells comprising a receptor-binding moiety, a translocation domain, and a nucleic acid-binding moiety. The translocation domain of Wagner was a fragment of influenza hemagglutinin HA-2, which was used to facilitate escape from endosomes. See abstract, and first full paragraph of column 2 on page 7934. The peptide is a fragment of SEQ ID NO: 5. See lines 1-3 of paragraph bridging pages 7934 and 7935, on page 7934.

Hawley-Nelson taught that there were a variety of proteins useful for promoting translocation in transfection compositions including bacterial proteins such as endotoxin A and Shigella toxin, as well as influenza hemagglutinin. See column 6, lines 15-64. It would have been obvious to one of ordinary skill in the art at the time of the invention

to substitute the influenza hemagglutinin peptide of Wagner for the bacterial toxin translocation peptides of Wels, Barnett, or Grandi because those of skill in the art recognized that these peptides had an equivalent activity in nucleic acid delivery complexes, i.e. facilitation of lysosomal escape. MPEP 2144.06 indicates that when it is recognized in the art that elements of an invention can be substituted, one for the other,

while retaining essential function, such elements are art-recognized equivalents. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). Furthermore, MPEP 2144.07 indicates that the selection of a known material based on its suitability for its intended use supports the determination of prima facie obviousness. See also Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Thus the invention as a whole was prima facie obvious.

Claim 114 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wels et al (WO 96/13599), Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and Grandi (WO 98/59065) as applied to claims 64, 75, 91, 92, 95, 99-101, 103-105, 108, 109, 112, 113, 116-122, and 124-126 above, and further in view of Smith et al (US 6,140,100).

The teachings of Wels, Barnett, Kabanov, and Grandi are summarized above and can be combined to render obvious a conjugate comprising a nucleic acid molecule, a toxin-derived translocation domain, an antibody specific for a surface antigen of a tumor cell, and a nucleic acid-binding histone, wherein the translocation domain, the antibody, and the histone are each bound to avidin via a separate biotin bridge.

These references did not teach the G250 tumor antigen.

Smith taught that G250 was a tumor cell antigen with a known cognate antibody that could be used to direct drugs to tumor cells expressing G250 antigen. See column 3, lines 59-65, and column 27, lines 8-12.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the G250 antibody of Smith, or any known tumor-targeting antibody, in the invention of Wels, as modified above. One of ordinary skill in the art appreciated that there were a variety of tumor-targeting antibodies known in the art prior to the time of the invention as evidenced by the teachings of Smith at column 3, lines 59-65, and column 27, lines 8-12. Further Wels suggested the use of such antibodies in nucleic acid delivery complexes. See page 8, last full paragraph. MPEP 2144.06 indicates that when it is recognized in the art that elements of an invention can be substituted, one for the other, while retaining essential function, such elements are art-recognized equivalents. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). Furthermore, MPEP 2144.07 indicates that the selection of a known material based on its suitability for its intended use supports the determination of prima facie obviousness. See also Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Thus the invention as a whole was prima facie obvious.

Claim 123 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wels et al (WO 96/13599), Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and

Grandi (WO 98/59065) as applied to claims 64, 75, 91, 92, 95, 99-101, 103-105, 108, 109, 112, 113, 116-122, and 124-126 above, and further in view of Cooper (US 5,624,820)

The teachings of Wels, Barnett, Kabanov, and Grandi are summarized above and can be combined to render obvious a conjugate comprising a nucleic acid molecule, a toxin-derived translocation domain, an antibody specific for a surface antigen of a tumor cell, and a nucleic acid-binding histone, wherein the translocation domain, the antibody, and the histone are each bound to avidin via a separate biotin bridge.

These references did not teach an episomally replicating vector.

Cooper taught episomally replicating vectors that provided a level of gene expression that was 20-fold greater than a corresponding vector with 5 copies integrated into the genome. See entire document, especially abstract and e.g. column 5, lines 49-55.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the episomally replicating vector of Cooper in the invention of Wels as modified above. One would have been motivated to do so to obtain the advantage of greater gene expression than episomal, non-replicating vectors or integrated vectors without the risk of cellular transformation provided by integrating vectors.

Thus the invention as a whole was prima facie obvious.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 115 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 13, 15-17, and 27-29 of U.S. Patent No. 7,074,613 in view of Wels et al (WO 96/13599), Barnett et al (WO 94/04696), Kabanov et al (US 6,221,959), and Grandi (WO 98/59065).

Claims 1-3, 13, 15-17, and 27-29 of '613 are directed to a targeting agent comprising a 5C5 monoclonal antibody specific for human renal carcinoma cells obtained from a hybridoma denoted 5C5, as designated by the CNCM under the number I-2184, or an antigen binding fragment thereof.

'613 did not teach a conjugate comprising a nucleic acid, a translocation domain, an antibody specific for a surface antigen of a target cell, and a nucleic acid binding

moiety wherein the translocation domain, the antibody, and the nucleic acid binding domain are bound to avidin by biotin bridges.

The teachings of Wels, Barnett, Kabanov, and Grandi are summarized above and can be combined to render obvious a conjugate comprising a nucleic acid molecule, a toxin-derived translocation domain, an antibody specific for a surface antigen of a tumor cell, and a nucleic acid-binding histone, wherein the translocation domain, the antibody, and the histone are each bound to avidin via a separate biotin bridge.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the antibody of '613 in the invention of Wels as modified in view of the teachings of Barnett, Kabanov, and Grandi, because Wels suggested the use of such tumor targeting antibodies in nucleic acid delivery complexes. See page 8, last full paragraph. MPEP 2144.06 indicates that when it is recognized in the art that elements of an invention can be substituted, one for the other, while retaining essential function, such elements are art-recognized equivalents. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). Furthermore, MPEP 2144.07 indicates that the selection of a known material based on its suitability for its intended use supports the determination of prima facie obviousness. See also Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

Thus the invention as a whole was prima facie obvious.

Conclusion

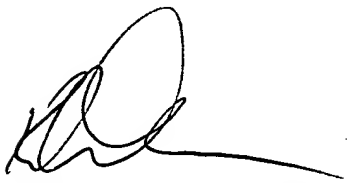
No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner(s) should be directed to Richard Schnizer, whose telephone number is 571-272-0762. The examiner can normally be reached Monday through Friday between the hours of 6:00 AM and 3:30. The examiner is off on alternate Fridays, but is sometimes in the office anyway.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, J. Douglas Schultz, can be reached at (571) 272-0763. The official central fax number is 571-273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



Richard Schnizer, Ph.D.
Primary Examiner
Art Unit 1635